Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A non-transitory computer-readable storage medium encoded with executable instructions for execution by a processor to remove a red eye from an image, the instructions comprising:

calculating a weighted red value for each pixel in the image, wherein the weight red value for a pixel is based on (1) red, green, and blue color values of the pixel and (2) a luminance value of the pixel, and the luminance value is a weighted sum of the red, the green, and the blue color values of the pixel;

selecting a plurality of pixels in the image having weighted red values greater than a threshold as red eye pixels; and

correcting the red eye pixels to remove the red eye from the image.

Claim 2 (currently amended): The non-transitory computer-readable storage medium of claim 1, wherein said calculating a weighted red value ~~comprising~~ comprises:

$$f_1 = \frac{c_1^{(1)} r + c_2^{(1)} g + c_3^{(1)} b}{Y},$$

wherein f_1 is the weighted red value, r is the red color value, g is the green color value, b is the blue color value, $c_1^{(1)}$ is a first weight given to the red color value, $c_2^{(1)}$ is a second weight given to the green color value, $c_3^{(1)}$ is a third weight given to the blue color value, and Y is the luminance value.

Claim 3 (previously presented): The non-transitory computer-readable storage medium of claim 2, wherein $c_1^{(1)}$ is 0.5, $c_2^{(1)}$ is 0.5, $c_3^{(1)}$ is -1, $Y = 0.299r + 0.587g + 0.114b$, and the threshold is 0.5.

Claim 4 (currently amended): The non-transitory computer-readable storage medium of claim 2, wherein the instructions further comprise, prior to said correcting:

calculating another weighted red value for each pixel in the image, wherein said another weight red value for a pixel is based on (1) ~~the~~ red, ~~the~~ green, ~~the~~ blue color values of the pixel, and (2) ~~the~~ a luminance value of the pixel, said calculating another weighted red value comprising:

$$f_2 = \frac{c_1^{(2)} r + c_2^{(2)} g + c_3^{(2)} b}{Y},$$

wherein f_2 is said another weighted red value, $c_1^{(2)}$ is another first weight given to the red color value, $c_2^{(2)}$ is another second weight given to the green color value, and $c_3^{(2)}$ is another third weight given to the blue color value; and

selecting another plurality of pixels in the image having another weighted red values greater than another threshold as additional red eye pixels.

Claim 5 (previously presented): The non-transitory computer-readable storage medium of claim 4, wherein $c_1^{(2)}$ is 0.6667, $c_2^{(2)}$ is 0.3333, $c_3^{(2)}$ is -1.0, $Y = 0.299r + 0.587g + 0.114b$, and the threshold is 0.5.

Claim 6 (previously presented): The non-transitory computer-readable storage medium of claim 1, wherein the instructions further comprise, prior to said correcting:

grouping a plurality of red eye pixels that are contiguous into a red eye region;

determining if the red eye region comprises a substantially round pupil; and

rejecting the plurality of red eye pixels when the red eye region does not comprise a substantially round pupil.

Claim 7 (previously presented): The non-transitory computer-readable storage medium of claim 6, wherein said determining if the red eye region comprises a substantially round pupil comprises:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles;

selecting one radius in the range of radii that provides a largest difference as a pupil radius for the red eye region;

determining a first ratio of (1) a first number of red eye pixels located in a circle having the pupil radius to (2) an area of the circle;

determining a second ratio of (1) a second number of red eye pixels in a ring having an inner radius of the pupil radius and an outer radius of a maximum radius in the range of radii to (2) an area of the ring; and

determining a difference between the first ratio and the second ratio, wherein the red eye region does not comprise a substantially round pupil when the difference is less than another threshold.

Claim 8 (previously presented): The non-transitory computer-readable storage medium of claim 7, wherein the range of radii ranges from 0.5 to 1.5 times a distance from the geometric center to a farthest red eye pixel in the red eye region.

Claim 9 (previously presented): The non-transitory computer-readable storage medium of claim 6, wherein the instructions further comprise:

determining if the red eye region is too close to another red eye region formed by grouping another plurality of red eye pixels that are contiguous; and

rejecting the plurality of red eye pixels when the red eye region is too close to said another red eye region.

Claim 10 (previously presented): The non-transitory computer-readable storage medium of claim 9, wherein said determining if the red eye region is too close to another red eye region comprises:

determining if a geometric center of the red eye region is within a range of distances of another geometric center of said another red eye region, wherein the range of distances is proportional to a pupil radius of the red eye region.

Claim 11 (previously presented): The non-transitory computer-readable storage medium of claim 10, wherein the instructions further comprise determining the pupil radius as follows:

determining the geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 12 (previously presented): The non-transitory computer-readable storage medium of claim 11, wherein the range of distances comprises 10 to 14 times the pupil radius.

Claim 13 (previously presented): The non-transitory computer-readable storage medium of claim 9, wherein the instructions further comprise:

determining if the red eye region is proximate to a facial region; and

rejecting the plurality of red eye pixels when the red eye region is not proximate to a facial region.

Claim 14 (previously presented): The non-transitory computer-readable storage medium of claim 13, wherein said determining if the red eye region is proximate to a facial region comprises:

generating a histogram for pixels in a ring having inner and outer radii proportional to a pupil radius of the red eye region;

selecting a most common color in the histogram;

comparing the most common color to a range of threshold skin colors; and

rejecting the plurality of red eye pixels when the most common color in the histogram is not within the range of the threshold skin colors.

Claim 15 (previously presented): The non-transitory computer-readable storage medium of claim 14, wherein said comparing comprises comparing the most common color in HSV color space to the range of threshold skin colors in HSV color space.

Claim 16 (previously presented): The non-transitory computer-readable storage medium of claim 14, wherein the instructions further comprise determining the pupil radius as follows:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 17 (previously presented): The non-transitory computer-readable storage medium of claim 16, wherein the inner and the outer radii comprises of 4 to 9 times the pupil radius.

Claim 18 (previously presented): The non-transitory computer-readable storage medium of claim 13, wherein the instructions further comprise:

determining if the red eye region is proximate to a sclera; and

rejecting the plurality of red eye pixels when the red eye region is not proximate to a sclera.

Claim 19 (previously presented): The non-transitory computer-readable storage medium of claim 18, wherein said determining if the red eye region is proximate to a sclera comprises:

generating a luminance histogram for pixels in a ring having inner and outer radii proportional to a pupil radius of the red eye region;

selecting a brightest color in the luminance histogram;

determine a ratio between a number of pixels in the ring having the brightest color to a number of red eye pixels within a circle having the pupil radius; and

rejecting the plurality of red eye pixels when the ratio is less than another threshold.

Claim 20 (previously presented): The non-transitory computer-readable storage medium of claim 19, wherein the instructions further comprise determining the pupil radius as follows:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 21 (previously presented): The non-transitory computer-readable storage medium of claim 20, wherein the inner and the outer radii comprises 2 to 5 times the pupil radius.

Claim 22 (canceled).

Claim 23 (previously presented): A non-transitory computer-readable storage medium encoded with executable instructions for execution by a processor to remove a red eye from an image, the instructions comprising:

calculating a weighted red value for each pixel in the image from a luminance, a red chrominance, and a blue chrominance values of the pixel in the image, comprising:

$$f_1 = \frac{1.41514(Cr-128)+1.23014(Cb-128)}{Y},$$

wherein f_1 is the weighted red value, Cr is the red chrominance value, Cb is the blue chrominance value, and Y is the luminance value;

selecting a plurality of pixels in the image having weighted red values greater than a threshold as red eye pixels; and

correcting the red eye pixels in the image.

Claim 24 (previously presented): The non-transitory computer-readable storage medium of claim 23, wherein the instructions further comprise, prior to said correcting:

calculating another weighted red value for each pixel in the image from the luminance, the red chrominance, and the blue chrominance values of each pixel in the image, comprising:

$$f_2 = \frac{0.69662(Cr-128)-1.88671(Cb-128)}{Y},$$

wherein f_2 is said another weighted red value; and

selecting another plurality of pixels in the image having another weighted red values greater than another threshold as additional red eye pixels.

Claim 25 (canceled).

Claim 26 (previously presented): A method for removing a red eye from an image, comprising:

calculating, using a programmed processor, a weighted red value for each pixel in the image, wherein the weight red value for a pixel is based on (1) red, green, and blue color values of the pixel and (2) a luminance value of the pixel, and the luminance value is a weighted sum of the red, the green, and the blue color values of the pixel;

selecting, using the programmed processor, a plurality of pixels in the image having weighted red values greater than a threshold as red eye pixels; and

correcting, using the programmed processor, the red eye pixels to remove the red eye from the image.

Claim 27 (currently amended): The method of claim 26, wherein said calculating a weighted red value ~~comprising~~ comprises:

$$f_1 = \frac{c_1^{(1)}r + c_2^{(1)}g + c_3^{(1)}b}{Y},$$

wherein f_1 is the weighted red value, r is the red color value, g is the green color value, b is the blue color value, $c_1^{(1)}$ is a first weight given to the red color value, $c_2^{(1)}$ is a second weight

given to the green color value, $c_3^{(1)}$ is a third weight given to the blue color value, and Y is the luminance value.

Claim 28 (previously presented): The method of claim 27, wherein $c_1^{(1)}$ is 0.5, $c_2^{(1)}$ is 0.5, $c_3^{(1)}$ is -1, $Y = 0.299r + 0.587g + 0.114b$, and the threshold is 0.5.

Claim 29 (currently amended): The method of claim 27, further comprising, prior to said correcting:

calculating another weighted red value for each pixel in the image, wherein said another weight red value for a pixel is based on (1) ~~the~~ red, ~~the~~ green, ~~the~~ blue color values of the pixel, and (2) ~~the~~ a luminance value of the pixel, said calculating another weighted red value comprising:

$$f_2 = \frac{c_1^{(2)} r + c_2^{(2)} g + c_3^{(2)} b}{Y},$$

wherein f_2 is said another weighted red value, $c_1^{(2)}$ is another first weight given to the red color value, $c_2^{(2)}$ is another second weight given to the green color value, and $c_3^{(2)}$ is another third weight given to the blue color value; and

selecting another plurality of pixels in the image having another weighted red values greater than another threshold as additional red eye pixels.

Claim 30 (previously presented): The method of claim 29, wherein $c_1^{(2)}$ is 0.6667, $c_2^{(2)}$ is 0.3333, $c_3^{(2)}$ is -1.0, $Y = 0.299r + 0.587g + 0.114b$, and the threshold is 0.5.

Claim 31 (previously presented): The method of claim 26, further comprising, prior to said correcting:

grouping a plurality of red eye pixels that are contiguous into a red eye region;

determining if the red eye region comprises a substantially round pupil; and

rejecting the plurality of red eye pixels when the red eye region does not comprise a substantially round pupil.

Claim 32 (previously presented): The method of claim 31, wherein said determining if the red eye region comprises a substantially round pupil comprises:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles;

selecting one radius in the range of radii that provides a largest difference as a pupil radius for the red eye region;

determining a first ratio of (1) a first number of red eye pixels located in a circle having the pupil radius to (2) an area of the circle;

determining a second ratio of (1) a second number of red eye pixels in a ring having an inner radius of the pupil radius and an outer radius of a maximum radius in the range of radii to (2) an area of the ring; and

determining a difference between the first ratio and the second ratio, wherein the red eye region does not comprise a substantially round pupil when the difference is less than another threshold.

Claim 33 (previously presented): The method of claim 32, wherein the range of radii ranges from 0.5 to 1.5 times a distance from the geometric center to a farthest red eye pixel in the red eye region.

Claim 34 (previously presented): The method of claim 31, further comprising:

determining if the red eye region is too close to another red eye region formed by grouping another plurality of red eye pixels that are contiguous; and

rejecting the plurality of red eye pixels when the red eye region is too close to said another red eye region.

Claim 35 (previously presented): The method of claim 34, wherein said determining if the red eye region is too close to another red eye region comprises:

determining if a geometric center of the red eye region is within a range of distances of another geometric center of said another red eye region, wherein the range of distances is proportional to a pupil radius of the red eye region.

Claim 36 (previously presented): The method of claim 35, further comprising determining the pupil radius as follows:

determining the geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 37 (previously presented): The method of claim 36, wherein the range of distances comprises 10 to 14 times the pupil radius.

Claim 38 (previously presented): The method of claim 34, further comprising:

determining if the red eye region is proximate to a facial region; and

rejecting the plurality of red eye pixels when the red eye region is not proximate to a facial region.

Claim 39 (previously presented): The method of claim 38, wherein said determining if the red eye region is proximate to a facial region comprises:

generating a histogram for pixels in a ring having inner and outer radii proportional to a pupil radius of the red eye region;

selecting a most common color in the histogram;

comparing the most common color to a range of threshold skin colors; and

rejecting the plurality of red eye pixels when the most common color in the histogram is not within the range of the threshold skin colors.

Claim 40 (previously presented): The method of claim 39, wherein said comparing comprises comparing the most common color in HSV color space to the range of threshold skin colors in HSV color space.

Claim 41 (previously presented): The method of claim 39, further comprising determining the pupil radius as follows:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 42 (previously presented): The method of claim 41, wherein the inner and the outer radii comprises of 4 to 9 times the pupil radius.

Claim 43 (previously presented): The method of claim 38, further comprising:

determining if the red eye region is proximate to a sclera; and

rejecting the plurality of red eye pixels when the red eye region is not proximate to a sclera.

Claim 44 (previously presented): The method of claim 43, wherein said determining if the red eye region is proximate to a sclera comprises:

generating a luminance histogram for pixels in a ring having inner and outer radii proportional to a pupil radius of the red eye region;

selecting a brightest color in the luminance histogram;

determine a ratio between a number of pixels in the ring having the brightest color to a number of red eye pixels within a circle having the pupil radius; and

rejecting the plurality of red eye pixels when the ratio is less than another threshold.

Claim 45 (previously presented): The method of claim 44, further comprising determining the pupil radius as follows:

determining a geometric center of the red eye region;

for each radius in a range of radii, determining a difference between (1) weighted red values of red eye pixels located at a radius and at a range of angles about the geometric center and (2) weighted red values of red eye pixels located at a next radius in the range of radii and at the range of angles; and

selecting one radius in the range of radii that provides a largest difference as the pupil radius for the red eye region.

Claim 46 (previously presented): The method of claim 45, wherein the inner and the outer radii comprises 2 to 5 times the pupil radius.

Claim 47 (previously presented): A method for removing a red eye from an image, comprising:

calculating, using a programmed processor, a weighted red value for each pixel in the image from a luminance, a red chrominance, and a blue chrominance values of the pixel in the image, comprising:

$$f_1 = \frac{1.41514(Cr-128)+1.23014(Cb-128)}{Y},$$

wherein f_1 is the weighted red value, *Cr* is the red chrominance value, *Cb* is the blue chrominance value, and Y is the luminance value;

selecting, using the programmed processor, a plurality of pixels in the image having weighted red values greater than a threshold as red eye pixels; and

correcting, using the programmed processor, the red eye pixels in the image.

Claim 48 (previously presented): The method of claim 47, further comprising, prior to said correcting:

calculating another weighted red value for each pixel in the image from the luminance, the red chrominance, and the blue chrominance values of each pixel in the image, comprising:

$$f_2 = \frac{0.69662(Cr - 128) - 1.88671(Cb - 128)}{Y},$$

wherein f_2 is said another weighted red value; and

selecting another plurality of pixels in the image having another weighted red values greater than another threshold as additional red eye pixels.